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Technical Memo

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Installing the FOCUS IDMS/SQL Relational Interface for MVS

The IDMS/SQL Interface is available for the MVS batch, TSO interactive, and MSO environments. The Interface can be run under the IDMS Central Version or in Local Mode. It is applicable to CA-IDMS/DB Release 12.0 and higher with the SQL Option.

This Technical Memo describes how to install the IDMS/SQL Interface in the MVS and MSO environments for FOCUS Release 7.0, and contains the following sections:

- Section 1. The Distribution Tape Contents
- Section 2. Installation Process
- Section 3. Accessing IDMS/SQL Databases in Local Mode and Central Version

Related publications which you may find useful include:

- *IDMS/SQL Interface Users Manual* (DN1001016.1095)
- *FOCUS for IBM Mainframe MVS/TSO Installation Guide, Release 7.0* (DN1000994.0295)
- *FOCUS for IBM Mainframe Multi-Session Option Installation and Technical Reference Guide, Release 7.0* (DN1000966.0195)

Section 1. The Distribution Tape Contents

The IDMS/SQL Interface is distributed on the same tape/cartridge as the base FOCUS product.

The table below shows the file number and dataset attributes for the files needed to use the IDMS/SQL Interface:

File #	Dataset name	Type	LRECL	BLKSIZE	RECFM
9	IDMS.LOAD	PDS	0	13030	U
10	IDMS.DATA	PDS	80	1600	FB

These files are partitioned data sets (PDS) in IEBCOPY dump format.

Section 2. Installation Process

You can install the IDMS/SQL Interface by following the steps listed below:

Step 1. Customize the IEBCOPY JCL.

Step 2. Installing the Interface

Step 3. Prepare the run-time libraries.

Step 4. Customize the FOCUS CLIST.

2.1 Customizing the IEBCOPY JCL

There are two datasets on the distribution tape which were created using the IEBCOPY utility. You should create the IEBCOPY procedure listed below and submit it for execution.

```
//COPYPDS  EXEC  PGM=IEBCOPY
//SYSPRINT DD SYSOUT=A
//INDD1    DD  DSN=IDMS.LOAD,DISP=OLD,
//         UNIT=unit,VOL=SER=volser,LABEL=(9,SL)
//INDD2    DD  DSN=IDMS.DATA,DISP=OLD,
//         UNIT=unit,VOL=SER=volser,LABEL=(10,SL),
//OUTDD1   DD DSN=prefix.idms.load,DISP=(NEW,CATLG,DELETE),
//         UNIT=SYSDA,SPACE=(TRK,(50,10,5))
//OUTDD2   DD DSN=prefix.idms.data,DISP=(NEW,CATLG,DELETE),
//         UNIT=SYSDA,SPACE=(CYL,(2,1,5),RLSE)
//SYSIN DD *
  COPY INDD=INDD1,OUTDD=OUTDD1
  SELECT MEMBER=(IDQFOC)
  COPY INDD=INDD2,OUTDD=OUTDD2
  SELECT MEMBER=(IDQFOC,IDQFOCCI,GENIDMSQ)

/*
```

where:

unit

Is the tape or cartridge.

volser

Is the tape or cartridge serial number.

prefix.idms.load

Is the dataset name of the load library.

prefix.idms.data

Is the dataset name of source library.

Upon successful completion you will have two new PDS libraries cataloged on your system. The dataset names for these libraries will depend on what you specified on your IEBCOPY OUTDD1 and OUTDD2 dd statements. Your site may already have or plan to install the conventional IDMS (Network) Interface. Both interfaces require an IDMS.DATA and IDMS.LOAD Library to be created during the installation process. The PDS members of each library are named differently and can be installed with the same copy JCL. Please refer to the FOCUS/IDMS installation instructions.

2.2 Installing the Interface

GENIDMSQ is a member in the IDMS.DATA PDS that contains the JCL needed to link and create the executable load module IDQFOC.

This JCL must be modified by adding a proper JOB card, Computer Associates' IDMS Release 12 Load Library, and supplying input libraries containing: the uninstalled load module IDQFOC from your IDMS.LOAD PDS, and the SYSLMOD PDS that will contain the executable interface load module IDQFOC. It is recommended that you do not overwrite the existing IDQFOC module by creating or specifying a different IDMS.LOAD PDS and allocating it to SYSLMOD.

2.3 Preparing the Run-Time Libraries

Using your site criteria, allocate a partitioned data set (PDS) for your Access File Descriptions as ddname FOCSQL. This library (or libraries) can be a mirror image of ddname MASTER and should have the same DCB parameters. Refer to the *FOCUS for IBM Mainframe MVS/TSO Installation Guide, Release 7.0* for assistance in selecting DCB parameters. The suggested name for this dataset is 'prefix.ACCESS.DATA'.

The FOCUS description of an IDMS database is called a Master File Description, and is stored as a member of a PDS allocated to ddname MASTER in the FOCUS CLIST/JCL. If allocation of this PDS is needed, please refer to the *FOCUS for IBM Mainframe MVS/TSO Installation Guide, Release 7.0* for assistance.

A stored FOCUS procedure is called a FOCEXEC, and is stored as a member of a PDS allocated to ddname FOCEXEC in the FOCUS CLIST/JCL. If allocation of this PDS is needed, please refer to the *FOCUS for IBM Mainframe MVS/TSO Installation Guide, Release 7.0* for assistance.

2.4 Customizing the FOCUS CLIST

The CLIST used to execute the IDMS/SQL Interface must be modified to include the Master File Description PDS, the Access File Description PDS and the PDS containing the IDMS/SQL Interface load module IDQFOC.

The 'prefix.IDMS.LOAD' dataset, as mentioned in Section 2.2, includes the IDMS/SQL load module IDQFOC that must be concatenated to the USERLIB, FOCLIB or STEPLIB ddnames. It is important to note that if multiple copies of the IDMS/SQL Interface exist, FOCUS will search USERLIB first, followed by FOCLIB then STEPLIB. For batch jobs, however, allocate all load libraries to the ddname STEPLIB.

The 'prefix.ERRORS.DATA' dataset from the FOCUS installation, contains the IDMS/SQL Interface error messages. This dataset must be allocated to the ERRORS ddname in the FOCUS CLIST. Failure to allocate this dataset will result in the following message when using the Interface:

```
ERROR TEXT MISSING
```

The CLIST or JCL must contain these allocations:

1. The PDS containing the IDMS/SQL Access File Descriptions.
2. The PDS containing the IDMS/SQL Master File Descriptions.
3. The PDS containing the FOCUS procedures (FOCEXECs).
4. The PDS containing the FOCUS ERROR messages.

5. The PDS containing the IDMS/SQL Interface load module.

6. The IDMS run-time load modules and the SYSIDMS dataset (please refer to Section 3).

The following table identifies the allocations needed to execute a FOCUS procedure (FOCEXEC) against an IDMS/SQL database:

PDS containing members:	Concatenate to ddname:
Access File Descriptions	FOCSQL
Master File Descriptions	MASTER
FOCUS Procedures	FOCEXEC
Error Messages	ERRORS
Interface Load Module FOCUS Load Modules	*USERLIB, FOCLIB or STEPLIB

*For batch jobs, allocate all load modules only to ddname STEPLIB.

Section 3. Accessing IDMS/SQL Databases In Local Mode And Central Version

Instructions for accessing IDMS/SQL databases differ for Local Mode access and Central Version (CV) access.

3.1 Central Version Access:

The ddname SYSCTL must be allocated to the SYSCTL dataset corresponding to the Central Version desired.

The IDMS/SQL functions will take place in the IDMS Central Version address space.

The subschema load modules are located and retrieved in the following order:

1. Central Version primary load area (DDLDCLOD area)

2. CDMSLIB ddname from the IDMS Central Version job

3. STEPLIB ddname from the IDMS Central Version job

The DMCL that is used is the one defined to the SYSIDMS dataset.

3.2 Local Mode Access:

The user must allocate all IDMS database files. These files must be allocated to their respective ddnames which are assigned in the CA-IDMS/DB schema.

All journal file allocations must be made available along with the default local mode journal, SYSJRNL, assigned to DD DUMMY.

When running the Interface in a batch job or from an MSO server, the load modules must be allocated to the ddname STEPLIB.

3.3 For Either Mode:

The CA-IDMS load library and the load library that contains the DMCLs and subschemas, must be allocated to the ddname STEPLIB, if executing from a CLIST allocated to STEPLIB in the user's TSO logon procedure.

The ddname SYSIDMS must be allocated and contain the appropriate DMCL name and whatever other parameters are necessary for your environment.

For setting up and controlling an IDMS SQL session, please refer to Chapter 11, *IDMS SQL Session Control* in the *IDMS/SQL Interface Users Manual.*